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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/659,870	09/11/2003	Dennis J. Hmcirik	03CR098/KE	5094

7590 03/15/2005
ROCKWELL COLLINS, INC.
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EXAMINER

CHANG, JOSEPH

ART UNIT PAPER NUMBER

2817

DATE MAILED: 03/15/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 10/659,870	Applicant(s) HRNCIRIK ET AL.	
	Examiner Joseph Chang	Art Unit 2817	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☐ Claim(s) ____ is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 20 is/are allowed.
- 6) ☒ Claim(s) 1-4 and 12-14 is/are rejected.
- 7) ☒ Claim(s) 5-11 and 15-19 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3 and 12-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Ham III, UP Pub. No. 20020080901 A1.

Regarding Claims 1, 12 Ham III discloses a synthesizer (Fig. 5, Para. [0038]-[0040], Abstract) comprising: a phase lock loop circuit (62); a microcontroller (72, 70), coupled to and configured for optimizing a bandwidth characteristic of said phase lock loop over (62) a range of variable output frequencies (output of 76); said microcontroller (72, 70) further configured for carrying out a self-calibration procedure (Figures 7, and see also Abstract, Figures 7-15 for details) for said phase lock loop; and said self-calibration procedure involving a monitoring of a tune voltage (204, 206 of Fig.7) for a voltage-controlled oscillator (74) and manipulation of inputs (CLOCK IN) into said phase lock loop circuit (62).

Regarding Claim 2, Fig. 5 shows inputs include a variable loop division ratio (is necessarily present in the CLOCK IN of 64).

Regarding Claims 3 and 13, Fig. 5 shows an integrator (68).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 4 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ham III in view of Dacus et al. US 6,223,061.

As discussed in the above rejections, Ham III discloses a synthesizer with a PLL with a loop filter. However, Ham III does not explicitly disclose the loop filter having an integrator op-amp, integrator resistor and an integrator capacitor. As would have been well known in the art as shown in Dacus et al (18, 22, 26), such components in a loop filter make up as an active loop filter for giving better suppression of noise.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use an active loop filter in the PLL of Ham III because such a modification would have provided better suppression of noise.

Allowable Subject Matter

Claim 20 is allowed.

Claims 5-11, 15-19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: the best prior art of record, Ham III, taken alone or in combination of other references, does not teach or fairly suggest variable resistance paths.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Jaehne et al. shows a PLL having a mode based on an error signal.


Nelson et al. shows a PLL with a self-calibration means.

Farabaugh shows an adaptive self-calibration of PLL.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph Chang whose telephone number is 571 272-1759. The examiner can normally be reached on Mon-Fri 0700-1730.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pascal can be reached on (571) 272-1769. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Joseph Chang
Patent Examiner
Art Unit 2817